CLAIMS

We claim:

1. A circuit enabling a headphone driver amplifier to operate from a single voltage supply comprising:

an amplifier having an output coupled to a headphone, said amplifier having a first and a second power supply lead, said first power supply lead connected to a power supply voltage; and

a DC voltage to voltage converter having an output, said DC voltage to voltage converter having a power source lead connected to the supply voltage, the output of said DC voltage to voltage converter connected to the second power supply lead, and said DC voltage to voltage converter generating an output voltage at the output that is substantially equal in magnitude to some negative quanta of the power supply voltage.

2. The circuit of claim 1 connected to a common ground by two external capacitors in the range of 0.47 to 3.3 micro farads.

3. The circuit of claim 1 wherein the DC voltage to voltage converter is a charge pump circuitry.

4. The circuit of claim 1 wherein the DC voltage to voltage converter is an inductor based voltage to voltage converter.

5. The circuit of claim 1 wherein the power supply voltage is a positive voltage.

6. The circuit of claim 1 wherein the power supply voltage is a negative voltage.

7. An amplifier circuitry for directly driving stereo headphones, said amplifier circuitry being driven by a single supply voltage VDD, said amplifier circuitry comprising:

a first and a second amplifier, the first amplifier having an output directly coupled to a first headphone and the second amplifier having an output directly coupled to a second headphone, each of the first and second amplifier having a VDD power supply lead connected to a positive voltage supply VDD; and

a charge pump circuitry output connected to a –VDD supply voltage of the first and second amplifier, wherein said charge pump circuitry output provides a voltage substantially equal in magnitude to the negative value of the VDD supply, said charge pump further having a power supply lead connected to the VDD supply voltage.

8. An portable amplifier system operative with a single voltage supply VDD, for directly driving a headphone comprising:

signal amplifying means for driving a headphone, said amplifying means output directly coupling the headphone, said amplifying means biased to ground voltage; and

negative voltage generator means for inverting an input voltage supply VDD to an output voltage supply –VDD of equal magnitude but opposite sign, said voltage supply generator means output coupled to the negative voltage lead –VDD of said amplifying means.

9. A headphone system operative with a single positive supply voltage comprising:

at least one headphone,

signal amplifying means driving the headphone, said amplifying means is directly coupled to the headphone and biases the headphone at zero volts; and

a negative voltage generator means providing a negative voltage substantially equal to but negative in magnitude to the positive voltage supply.

10. A circuit enabling a driver amplifier to operate from a single voltage supply comprising:

an amplifier having an output driving a load, said amplifier having a first and a second power supply lead, said first power supply lead connected to a supply voltage; and

a DC voltage to voltage converter circuitry having an output, said DC voltage to voltage converter circuitry having a power source lead connected to the supply voltage, the output of said DC voltage to voltage converter circuitry connected to the second power supply lead and said output being substantially equal in magnitude to some negative quanta of the power supply voltage.

11. A method of directly driving a load in a portable device operative off of a single voltage supply VDD comprising:

driving a headphone using a signal amplifying means having an output, wherein said output directly coupling the headphone, said amplifying means biased to ground voltage; and

inverting an input voltage using a negative voltage generator means for inverting a voltage supply VDD to an output voltage, said output voltage being substantially equal to some negative quanta of the voltage supply VDD, said negative voltage supply generator means output coupled to the negative voltage lead –VDD of said amplifying means.